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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,946	12/09/2003	Jinquan Dai	42P16434	6757
<div>7590      06/15/2007</div> <div>James H. Salter BLAKELY, SOKOLOFF, TAYLOR &amp; ZAFMAN LLP Seventh Floor 12400 Wilshire Boulevard Los Angeles, CA 90025</div>			<div>EXAMINER</div> <div>CHOU, ANDREW Y</div>	
			<div>ART UNIT</div> <div>2192</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>06/15/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,946	<b>Applicant(s)</b> DAI ET AL.	
	<b>Examiner</b> Andrew Y. Chou	<b>Art Unit</b> 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-24 have been examined. Claims 1, 9, and 17 are the independent claims. The priority date recognized for this application is 12/09/2003.

### ***Oath/Declaration***

2. The Office acknowledges receipt of a properly signed oath/declaration filed on 12/09/2003.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruttenberg US 5,491,823 (hereinafter Ruttenberg).

### **Claims 1, 9, and 17:**

As per claims 1, 9, and 17, Ruttenberg teaches a system (see for example FIG. 1, and related text), machine readable medium , and a method version of scheduling a sequence of instructions, comprising:

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reading a target program (see for example FIG. 1, item 126, "Application Programs", and related text);

identifying a pipeline control hazard in the sequence of instructions (see for example column 14, lines 35-44);

selecting the sequence of instructions to re-order (see for example column 13, lines 34-44);

re-ordering the sequence of instructions by executing a backward scheduling method (see for example column 13, lines 34-; and re-ordering the sequence of instructions by executing a forward scheduling method.

**Claims 2, 10, and 18:**

As per claims 2, 8, and 18, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1, wherein the pipeline control hazard is a branch instruction (see for example columns ~~12-13~~, "2.4 Loop Overhead").

**Claims 3, 9, and 19:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1, further comprising:

performing the backward scheduling method prior to performing the forward scheduling method (see for example column 13, lines 18-23).

**Claims 4, 10, and 20:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1 wherein the forward scheduling method reorders at least one instruction within a delay slot (see for example column 13, lines

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50, 54).

**Claims 5, 11, and 21:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1, further comprising:

evaluating the forward scheduling method for a schedule failure (see for example column 13, lines 45-61); and

using the backward scheduling method result when the forward schedule method encounters the schedule failure (see for example column 13, lines 45-61).

**Claims 6, 12, and 22:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1, further comprising:

packing the delay slot subsequent to executing the forward scheduling method (see for example column 13, lines 54-57).

**Claims 7, 13, and 23:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1 wherein the delay branch is a fixed length (see for example column 12, lines 35-45).

**Claims 8, 14, and 24:**

As per claims 3, 9, and 19, Ruttenberg teaches the system, machine-readable medium, and method version as recited in claim 1 wherein the delay branch is a variable length (see for example column 12, lines 35-45).

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**Conclusion**

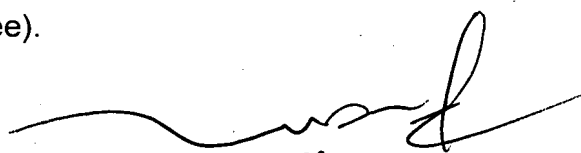
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Chou whose telephone number is (571) 272-6829. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached on (571) 272-3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

  
TUAN DAM  
SUPERVISORY PATENT EXAMINER